

Claims

- [c1] 1.The medical diagnostic system, comprising:
a plurality of medical diagnostic components communicatively coupled via communications circuitry; and
a dynamic configuration system for the plurality of medical diagnostic components, comprising:
a configuration data distributor of multi-component configuration data;
a component-specific data extractor of the multi-component configuration data;
a configuration data processor.
- [c2] 2.The medical diagnostic system of claim 1, wherein the plurality of medical diagnostic components comprise imaging components.
- [c3] 3.The medical diagnostic system of claim 2, wherein the imaging components comprise magnetic resonance imaging components.
- [c4] 4.The medical diagnostic system of claim 2, wherein the imaging components comprise computed tomography components.
- [c5] 5.The medical diagnostic system of claim 2, wherein the imaging components comprise ultrasound components.
- [c6] 6.The medical diagnostic system of claim 2, wherein the imaging components comprise x-ray components.
- [c7] 7.The medical diagnostic system of claim 1, wherein the dynamic configuration system is operable at runtime of the medical diagnostic system.
- [c8] 8.The medical diagnostic system of claim 1, wherein the dynamic configuration system is architecture independent.
- [c9] 9.The medical diagnostic system of claim 1, wherein the dynamic configuration system is operable within a plurality of medical modalities for cross-modality deployment.
- [c10] 10.The medical diagnostic system of claim 1, wherein the dynamic

configuration system is scalable to facilitate additional system configuration.

- [c11] 11.The medical diagnostic system of claim 1, wherein the configuration data distributor comprises an event-triggered broadcasting system.
- [c12] 12.The medical diagnostic system of claim 1, wherein the component-specific data extractor comprises a component-specific application separator.
- [c13] 13.The medical diagnostic system of claim 1, wherein the configuration data processor comprises a script interpreter for the multi-component configuration data.
- [c14] 14.The medical diagnostic system of claim 1, wherein the dynamic configuration system comprises a distribution triggering system.
- [c15] 15.The medical diagnostic system of claim 14, wherein the distribution triggering system comprises a user interface.
- [c16] 16.The medical diagnostic system of claim 14, wherein the distribution triggering system comprises an application event response system.
- [c17] 17.The medical diagnostic system of claim 14, wherein the distribution triggering system comprises a global mode monitoring system.
- [c18] 18.The medical diagnostic system of claim 14, wherein the distribution triggering system comprises a component status monitoring system.
- [c19] 19. The medical diagnostic system of claim 1, wherein the dynamic configuration system comprises a script generation system for the multi-component configuration data.
- [c20] 20.The medical diagnostic system of claim 1, wherein the configuration data distributor is disposed on at least one of the plurality of medical diagnostic components and the component-specific data extractor is disposed on remaining components of the plurality of medical diagnostic components.
- [c21] 21.The medical diagnostic system of claim 20, wherein the configuration data processor is disposed on each of the remaining components.

- [c22] 22. A medical diagnostic component, comprising:
a configuration data provider of multi-component configuration data having extractable component-specific configuration data for a plurality of communicatively coupled medical diagnostic components; and
a configuration data broadcaster of the multi-component configuration data to the plurality of communicatively coupled medical diagnostic components.
- [c23] 23. The medical diagnostic component of claim 22, wherein the plurality of communicatively coupled medical diagnostic components comprise imaging components.
- [c24] 24. The medical diagnostic component of claim 22, wherein the configuration data provider and the configuration data broadcaster are operable at runtime of a medical diagnostic system.
- [c25] 25. The medical diagnostic component of claim 22, wherein the configuration data provider and the configuration data broadcaster are operable across different component architectures.
- [c26] 26. The medical diagnostic component of claim 22, wherein the configuration data provider and the configuration data broadcaster are operable across different medical modalities.
- [c27] 27. The medical diagnostic component of claim 22, wherein the extractable component-specific configuration data is modifiable centrally via the configuration data provider.
- [c28] 28. The medical diagnostic component of claim 22, wherein the configuration data broadcaster comprises an event-triggered data distribution system.
- [c29] 29. The medical diagnostic component of claim 22, comprising a configuration data processor.
- [c30] 30. The medical diagnostic component of claim 22, wherein the configuration data processor comprises an interpretation distributor of the configuration data processor to the plurality of communicatively coupled medical diagnostic components.

- [c31] 31.A medical diagnostic component, comprising:
a configuration data receiver for a distributable multi-component configuration file comprising extractable component-specific application data for a plurality of medical diagnostic components;
a configuration data extractor of the extractable component-specific application data; and
a configuration data processor of the extractable component-specific application data.
- [c32] 32.The medical diagnostic component of claim 31, wherein the plurality of medical diagnostic components comprise imaging components.
- [c33] 33.The medical diagnostic component of claim 31, wherein the plurality of medical diagnostic components comprise different operating architectures.
- [c34] 34.The medical diagnostic component of claim 31, wherein the plurality of medical diagnostic components comprise different medical modalities.
- [c35] 35.The medical diagnostic component of claim 31, wherein the configuration data receiver, the configuration data extractor, and the configuration data processor are operable at runtime of a medical diagnostic component comprising the plurality of medical diagnostic components.
- [c36] 36.The medical diagnostic component of claim 31, wherein the distributable multi-component configuration file is modifiable via a multi-component configuration system disposed on one of the plurality of medical diagnostic components.
- [c37] 37.The medical diagnostic component of claim 31, wherein the configuration data processor comprises an event-triggered processing system.
- [c38] 38.The medical diagnostic component of claim 31, wherein the configuration data extractor comprises a component-specific application separator.
- [c39] 39.The medical diagnostic component of claim 31, wherein the configuration data processor comprises a script interpreter for the extractable component-specific application data.

- [c40] 40. A configuration system for a medical diagnostic system, comprising:
distribution means for distributing multi-component behavioral data to a plurality of medical diagnostic components; and
processing means for processing component-specific portions of the multi-component behavioral data at each of the plurality of medical diagnostic components.
- [c41] 41. The configuration system of claim 40, further comprising triggering means for executing the component-specific portions at each of the plurality of medical diagnostic components.
- [c42] 42. The configuration system of claim 40, further comprising creation means for providing the multi-component behavioral data.
- [c43] 43. The configuration system of claim 40, further comprising modification means for changing the component-specific portions via the multi-component behavioral data.
- [c44] 44. A method of configuring distributed components of a medical diagnostic system, comprising the acts of:
distributing multi-component configuration data comprising extractable component-specific configuration data for a plurality of medical diagnostic components;
extracting the extractable component-specific configuration data from the distributed multi-component configuration data at each component of the plurality of medical diagnostic components; and
processing the extractable component-specific configuration data extracted at each component.
- [c45] 45. The method of claim 44, wherein the act of distributing comprises the act of broadcasting the multi-component configuration data to at least one medical imaging component.
- [c46] 46. The method of claim 44, wherein the act of distributing comprises the act of broadcasting the multi-component configuration data across different medical modalities.

- [c47] 47.The method of claim 44, wherein the act of distributing comprises the act of broadcasting the multi-component configuration data across different operating architectures.
- [c48] 48.The method of claim 44, wherein the act of distributing comprises the act of responding to a global change in the medical diagnostic system.
- [c49] 49.The method of claim 44, wherein the act of distributing comprises the act of interactively initiating a configuration change in the medical diagnostic system at runtime.
- [c50] 50.The method of claim 44, wherein the act of distributing comprises the act of executing a multi-stage medical diagnostic application requiring different component behavioral characteristics for each stage.
- [c51] 51.The method of claim 44, wherein the acts of extracting and processing are performed at runtime of the medical diagnostic system.
- [c52] 52.The method of claim 51, wherein the act of distributing is performed at runtime of the medical diagnostic system.
- [c53] 53.The method of claim 44, where the act of extracting comprises the act of dividing the extracted component-specific configuration data into distinct configuration groups.
- [c54] 54.The method of claim 53, wherein act of dividing comprises the act of monitoring for triggers associated with each of the distinct configuration groups.
- [c55] 55.The method of claim 44, where the act of extracting comprises the act of monitoring for a triggering event associated with the extracted component-specific configuration data at each component of the plurality of medical diagnostic components.
- [c56] 56.The method of claim 44, comprising the act of providing the multi-component configuration data.
- [c57] 57.The method of plant 44, comprising the act of modifying the extractable

component-specific configuration data via the multi-component configuration data.

- [c58] 58.A computer program for a medical diagnostic system, comprising:
a tangible medium configured to support machine-readable code; and
machine-readable code supported on the medium and comprising a
broadcasting multi-component configuration system adapted to provide a
multi-component configuration file having extractable component-specific
configuration data for a plurality of medical diagnostic components.
- [c59] 59.The computer program of claim 58, wherein the broadcasting multi-
component configuration system comprises a configuration data assembler of
the multi-component configuration data.
- [c60] 60.The computer program of claim 58, wherein the broadcasting multi-
component configuration system comprises a configuration data broadcaster of
the multi-component configuration data to the plurality of medical diagnostic
components.
- [c61] 61.The computer program of claim 58, wherein the broadcasting multi-
component configuration system comprises a configuration data receiver for a
distributed multi-component configuration file comprising the extractable
component-specific configuration data.
- [c62] 62.The computer program of claim 58, wherein the broadcasting multi-
component configuration system comprises a configuration data extractor of
the extractable component-specific configuration data.
- [c63] 63.The computer program of claim 58, wherein the broadcasting multi-
component configuration system comprises a configuration data processor of
the extractable component-specific configuration data.